

1 1. A bond pad assembly comprising:
2 a bond pad;
3 a trace coupled to said pad and extending away
4 from said pad in a first direction; and
5 a trace stub coupled to said pad and extending
6 away from said pad in a direction other than said first
7 direction.

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1 2. The assembly of claim 1 wherein said stub extends
2 diametrically away from said trace.

1 3. The assembly of claim 1 wherein said bond pad is
2 a non-solder mask defined pad.

1 4. The assembly of claim 1 wherein said stub has a
2 thickness and width substantially equal to the thickness
3 and width of said trace.

1 5. The assembly of claim 1 including a solder mask
2 which defines a solder receiving area proximate to said
3 bond pad.

1 6. The assembly of claim 5 wherein said stub extends
2 outwardly into said solder mask.

1 7. The assembly of claim 1 including a set of three
2 stubs each oriented 90° away from one of the other of said
3 stubs, one of said stubs being diametrically opposed to
4 said trace.

1 8. The assembly of claim 1 wherein said bond pad
2 includes a tear-drop shaped portion coupling said bond pad
3 to said trace, said stub also being tear-drop shaped.

1 9. The assembly of ~~claim 1~~ wherein said bond pad is
2 adapted to receive a solder ball.

1 10. A bonding system comprising:
2 a bond pad;
3 a trace coupled to said bond pad and extending
4 away from said pad; and
5 an element adapted to counteract the attractive
6 forces applied by the trace to solder placed on the bond
7 pad.

1 11. The system of claim 10 wherein said element
2 includes a trace-like portion extending away from said bond
3 pad in a direction opposite to the direction that said
4 trace extends away from said bond pad.

1 12. The system of claim 11 wherein said trace-like
2 element has the width and thickness of said trace.

1 13. The system of claim 10 wherein said bond pad is
2 coupled to said trace by a tear-drop shaped portion, said
3 element including a tear-drop shaped portion.

1 14. The system of claim 10 including a solder mask
2 defining a solder mask opening around said bond pad, said
3 element extending from said bond pad and through said
4 opening.

1 15. The system of claim 10 including a solder mask
2 and an opening defined in said solder mask surrounding said
3 bond pad wherein said element does not extend across said
4 solder mask opening.

1 16. The system of claim 10 wherein the attractive
2 forces applied to said solder ball arise from the
3 configuration of said trace, said element adapted to
4 emulate said trace.

1 17. The system of claim 10 including a solder mask
2 surrounding said bond pad, the attractive force on said
3 solder being the result of the effects of the edge of said

4 solder mask, said solder mask edge being arranged to create
5 a counteractive force on said solder.

1 18. The system of claim 17 wherein said solder mask
2 includes a plurality of symmetrically disposed lobes.

1 19. The system of claim 10 wherein said element is
2 configured symmetrically to said trace.

1 20. The system of claim 10 further including a device
2 adapted to center the solder against forces which act
3 transversely to the length of said trace.

1 21. The system of claim 20 including a stub trace
2 which extends away from said bond pad in opposition to said
3 trace and a pair of stub traces oriented at 90° to said
4 trace and coupled to said bond pad.

1 22. A method of positioning solder on bond pads
2 coupled to traces, said bond pads being surrounded by
3 solder mask material, said method comprising:

4 depositing solder on a first bond pad having a
5 trace extending in a first direction;

6 depositing solder on a second bond pad having a
7 trace extending in a second direction, said first and
8 second directions being different; and

9 causing said solder deposited on said first bond
10 pad to move to a displaced position with respect to said
11 first bond pad, such that said solder aligns with said
12 solder deposited on said second bond pad.

1 23. The method of claim 22 including nesting said
2 first bond pad with a trace coupled to said second bond
3 pad, and nesting said second bond pad with a trace coupled
4 to said first bond pad.

1 24. The method of claim 22 wherein causing includes
2 wicking said solder towards a trace coupled to said first
3 bond pad.

1 25. A method of forming solder connections in
2 integrated circuits comprising:
3 depositing solder on a bond pad;
4 counteracting an attractive force supplied by a
5 bond pad trace to the solder by providing a similar and
6 opposite force on the solder.

1 26. The method of claim 25 wherein counteracting
2 includes forming a trace-like portion which extends away
3 from said bond pad in a direction opposite to the direction
4 that the trace extends away from said bond pad.

1 27. The method of claim 26 wherein counteracting
2 includes forming a solder mask around said bond pad and
3 causing said trace-like element to extend outwardly from
4 said bond pad into said solder mask.

1 28. The method of claim 25 wherein counteracting
2 includes forming tear-drop shaped portions on two opposed
3 sides of a bond pad.

1 29. The method of claim 25 further including
2 providing elements which tend to cause said solder to
3 center on said bond pad.

1 30. The method of claim 29 further including
2 providing a set of three elements coupled to said bond pad
3 and oriented at approximately 90° to an adjacent element.

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